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**HORN FLY  
CONTROL  
ON  
BEEF CATTLE**



**BUREAU OF  
ENTOMOLOGY  
*and*  
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AGRICULTURAL  
RESEARCH ADMINISTRATION  
U. S. DEPT. *of* AGRICULTURE**

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This leaflet was prepared by the  
Division of Insects Affecting Man and  
Animals.

THE HORN FLY on beef cattle can be controlled effectively and economically with DDT, methoxychlor, TDE, and toxaphene. All these materials may be used as sprays, but at present only DDT is recommended as a dip.

### How to Dilute the Insecticide

All four insecticides are available both as wettable powders and as emulsifiable concentrates. These formulations may contain from 25 to 75 percent of the toxicant. They must be diluted with water before use, and are generally applied at 0.5-percent strength. The approximate quantities of insecticide to use in making this dilution from the different formulations are given below.

	<u>Quantity to make</u>	
	<u>100 gal.</u>	<u>5 gal.</u>
Wettable powder:	<u>Pounds</u>	<u>Pounds</u>
25%	16	3/4
40%	10	1/2
50%	8	2/5
75%	5-1/3	1/4
Emulsifiable concentrate:	<u>Quarts</u>	<u>Cupfuls</u>
25%	8	1-1/2
50%	4	3/4
60%	3-1/3	2/3
65%	3	5/8

## Spray Applications

Two quarts of a 0.5-percent spray is recommended for the average mature animal. In some parts of the country, especially on short-haired cattle, concentrations up to 1.5 percent have been found more practical. If this strength is used, only  $3/4$  to 1 quart of spray is required. When toxaphene is used, however, cattle, especially calves, may be harmed by sprays stronger than 0.5 percent.

Sprays should be applied every 3 or 4 weeks during the fly season. If all owners of livestock in a community treat their animals, the protection period is increased.

Many types of power spray equipment are available for use on large numbers of cattle. Sprayers operating at 100 to 200 pounds per square inch are generally most suitable. They should be equipped with agitators to keep the insecticide well mixed while it is being applied.

When charging spray tanks, mix the insecticide thoroughly. Before the spray is used to treat the animals, direct it back into the tank until the power sprayer has run long enough to assure thorough mixing.

Be sure the insecticide will mix uniformly with the water available; if an oily layer forms, do not apply the spray to the animal.

Place the animals in suitable chutes or crowd pens to facilitate spraying.

For control of horn flies only, it is not necessary to treat the animals all over. Apply the sprays so as to

wet the shoulders, back, and flanks. For this purpose an orchard-type, adjustable nozzle is most satisfactory. If you desire to control lice and other pests at the same time, spray all parts of the animals thoroughly.

A few head of beef cattle can be treated with hand air-pressure sprayers of the cylindrical or knapsack type. Since some of these sprayers contain no agitator, shake the tank occasionally to keep the insecticide in suspension.

### Use of Dips

If you prefer to dip your animals, use DDT at a 0.5-percent concentration. Methoxychlor, TDE, and toxaphene are not recommended for use in dips until more is known about their stability after repeated use.

Dips can be mixed in the vat by rapidly lowering and raising a bucket or oil can attached to a rope or pole.

### PRECAUTIONS

Handle all insecticides with care and avoid unnecessary exposure while mixing or applying them. If any is accidentally spilled on the skin, wash it off immediately.

Do not contaminate feed, feeding utensils, watering troughs, or water in dirt tanks or fish ponds with the insecticide.



If you have any questions regarding the mixing and application of any of the insecticides recommended in this leaflet, consult your county agent, extension entomologist, or specialist on livestock pest control in your State agricultural college or experiment station, or write to the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington 25, D. C.

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Information on the control of other pests of livestock is given in the following publications:

New Sprays for Ticks on Livestock.  
Bur. Ent. and Plant Quar. EC-10.

Fly Control on Dairy Cattle and in  
Dairy Barns. U. S. Dept. Agr.  
Leaflet 283.

House Fly Control. U. S. Dept.  
Agr. Leaflet 182, rev.





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